

2012 Leading by Example Awards

Presented by the Commonwealth of Massachusetts

*The **Leading by Example Awards** recognize outstanding efforts among Commonwealth agencies, public higher education institutions, municipalities, and individuals that have established and implemented policies and programs resulting in significant and demonstrable energy and environmental benefits.*

STATE AGENCIES

The **Department of Correction (DOC)** operates correctional facilities across the Commonwealth and is aggressively pursuing various clean energy strategies to reduce the environmental footprint of those facilities, including investments in renewable energy, energy efficiency, combined heat and power, lighting improvements, computer power management, and real-time metering. DOC is leading the way in the state with 1 MW of solar PV and 3.3 MW of wind installed across the agency, which, in total, will generate each year the equivalent amount of electricity used by 1,150 Massachusetts homes. DOC has also invested in water conservation efforts, zero emissions license plate manufacturing, environmentally preferable purchasing and chemical tracking, and large scale recycling programs. DOC is currently working with to implement comprehensive energy efficiency measures at their Gardner facility that will completely replace the use of heavy oil with cleaner natural gas.



The **Department of Conservation and Recreation (DCR)** manages one of the largest state parks systems in the country. DCR is investing in renewable energy installations across the agency, including a 191,000 BTU wood pellet boiler system and two solar PV systems, totaling 67 kW. DCR recently completed the installation of low-emissivity ceilings at five rinks in the greater Boston area, which are expected to reduce the rinks' energy consumption by 25-40%, and replaced 1,200 inefficient light bulbs with super-efficient LEDs across various DCR facilities. This past year, DCR opened the Connors Memorial Swimming Pool, which uses solar power for electricity and hot water, and is expected to achieve near zero-net energy performance. DCR is working with DOER to develop a comprehensive plan for the first zero net energy Boston Harbor Island.

PUBLIC HIGHER EDUCATION



North Shore Community College (NSCC) opened the doors of the first state-owned Zero Net Energy Building this past year. The innovative Health Professions and Student Services Building incorporates a 345 kW solar PV system that is projected to generate 410,000 kWh of electricity per year, a greywater storage tank, a geothermal ground source heat pump system, as well as optimal building orientation, high performance glazing, daylighting maximization and lighting controls. In addition to the zero net energy building, NSCC installed 139kW of solar capacity at the Danvers and Lynn campuses and underwent \$3.6 million of building efficiency improvements, expected to save 2 million kWh per year and reduce greenhouse gas emissions annually by almost 1,000 tons.

University of Massachusetts Lowell (UML) is working toward its Climate Action Plan goals through implementation of projects on campus, as well as incorporating energy and environmental awareness into academics and campus community outreach. UML recently installed 250kW of solar PV across five roofs on campus, installed over 100 real-time, building-level energy meters on campus to track usage and identify efficiency opportunities. The University is incorporating green building principles as the campus continues to grow, as demonstrated by the most recent campus addition, the Emerging Technologies and Information Center, a LEED Silver building. UML has an impressive zero sort recycling program on campus that has increased solid waste recycling rate on campus by more than 376% from 2008 to 2011.



MUNICIPALITIES



The **Town of Sutton**, was designated a Green Community by DOER in 2011. Sutton successfully installed 201kW solar PV array on the town's Early Learning Center, which is expected to reduce the town's annual electric bills by \$25,340. In one year alone, this array generated \$110,000 in revenue for the town through the sale of solar renewable energy credits. Sutton is also planning a host of other efforts related to solar PV, including a 75 kW system slated to be installed on the new Middle/High School and participation in the Solarize Massachusetts program to increase residential solar in the town, as well as the adoption of a new master plan specifying that all new town buildings incorporate roof-mounted solar PV. Sutton is purchasing hybrid vehicles for the town and conducting lighting upgrades. Sutton is a model example of the successes that can be achieved in small communities with a progressive vision and hard work.

The **Town of Scituate** was also designated a Green Community in 2011. A variety of large scale renewable and efficiency projects are underway in the town that are expected to save \$675,000 per year and reduce grid electricity by 8.7 million kwh, equivalent to the electricity used by more than 1,200 Massachusetts homes each year. The projects include a 1.5MW wind turbine installation, a 3MW solar PV array on a capped landfill, and comprehensive \$5.9 million performance contract that includes lighting upgrades, boiler conversions from oil to natural gas, insulation improvements, variable frequency drives, demand control ventilation, and computer energy management software.



The **Merrimack Valley Planning Commission (MVPC)** was created in 1959 and serves 15 diverse communities in the Commonwealth. MVPC used its focus on collaboration to implement an innovative approach to help streamline processes that will enable cities and towns to address energy efficiency and renewable energy. MVPC developed the Clean Energy Action Plan for its 15 communities, setting forth recommendations and suggestions for advancing clean energy goals on a town by town basis. MVPC conducted procurement for a regional performance contract on behalf of 11 of its member towns, of which 6 have signed agreements with Ameresco for projects that are expected to result in more than \$1 million in annual savings. MVPC contracted with a firm to conduct an analysis of opportunities for solar PV on landfills across member communities and is now providing assistance to communities looking to move forward with project development. The efforts of MVPC have laid the groundwork for projects that towns would not be able to pursue without the resources provided by the Commission.



INDIVIDUALS



Betty Ann Learned served as Massasoit Community College's Vice President of Administration and Chief Financial Officer from 2007 through June 2012. Ms. Learned led the College through a comprehensive energy and water conservation project with the Division of Capital Asset Management, expected to result in a 40% energy reduction and save \$12 million over 20 years. Under Ms. Learned's leadership, Massasoit also installed 370 kW of solar PV across five campus buildings and real-time electricity and natural gas metering at all buildings. Ms. Learned oversaw the development and implementation of the College's first comprehensive recycling program, which has now achieved a recycling rate of 30%, as well as the installation of 8 native gardens on campus. Betty Ann Learned has been an invaluable resource to the Leading by Example program throughout her time at Massasoit.

Jim Kelly served as the Town of Sudbury's Building Commissioner and Zoning Enforcement Officer, until recently when he was appointed to the newly created position of Facilities Manager. Prior to this appointment, Jim voluntarily took on an important role in the Town, acting as a Sustainability/Energy Manager. Under Mr. Kelly's leadership, Sudbury was in the first group of municipalities to receive Green Community designation from DOER. Efforts to improve municipal building efficiency under Mr. Kelly's leadership include HVAC controls, lighting controls in all schools, and the selection of fuel efficient vehicles for town use. Mr. Kelly successfully oversaw the installation of solar thermal and solar PV systems and a streetlight conversion project that will save the town \$21,000 each year. This award recognizes Mr. Kelly's passion and commitment to going above and beyond his official duties to help the Town reach and surpass its energy goals.

